Amendment under 37 C.F.R. § 1.111

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An intermediate layer material composition for a multilayer resist process, comprising (A) a polymer containing a repeating unit having on a side chain thereof a group represented by the following general formula (A-I) and at least one of a repeating unit represented by the following general formula (A-II) and a repeating unit represented by the following general formula (A-III):

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wherein R_1 represents an alkyl group, an alkoxyl group, an aryl group, an aralkyl group, a cyclopentyl group or a cyclohexyl group; a plurality of R_1 's each may be the same or different; R_5 represents a hydrogen atom or a methyl group; R_6 represents an aryl group or an aralkyl group.

2. (original): The intermediate layer material composition described in claim 1, wherein the polymer is a polymer having at least one of repeating units represented by the following general formulas (a-1) to (a-4):

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$$R_{2}$$
 R_{3}
 R_{3}
 R_{4}
 R_{4}
 R_{4}
 R_{4}
 R_{4}
 R_{4}
 R_{5}
 R_{1}
 R_{3}
 R_{1}
 R_{3}
 R_{4}
 R_{4}
 R_{4}
 R_{4}
 R_{5}
 R_{1}
 R_{1}
 R_{2}
 R_{3}
 R_{3}
 R_{3}
 R_{4}
 R_{5}
 R_{5}
 R_{3}
 R_{4}
 R_{4}
 R_{4}
 R_{4}
 R_{4}
 R_{5}
 R_{5

wherein (A-I) represents the group represented by the general formula (A-I) described in claim 1; R₂ represents a hydrogen atom or a methyl group; R₃ represents an alkylene group or a phenylene group; R₄ represents an alkylene group, a phenylene group or -C(=O)-O-R'-; R' represents an alkylene group.

- 3. (canceled).
- 4. (original): The intermediate layer material composition described in claim 1, wherein the polymer contains the repeating unit having on a side chain thereof the group represented by the following general formula (A-I) in an amount of 3 to 90 mol%.
- 5. (original): The intermediate layer material composition described in claim 1, which further comprises (B) a crosslinking agent.
- 6. (original): The intermediate layer material composition described in claim 5, wherein the crosslinking agent (B) is a phenol derivative having a molecular weight of 1,200 or less, containing 3 to 5 benzene rings in its molecule, and having 2 or more hydroxymethyl groups or

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alkoxymethyl groups in total, wherein the hydroxymethyl groups or alkoxymethyl groups bind to the benzene rings.

- 7. (original): The intermediate layer material composition described in claim 1, which further comprises (C) a compound capable of generating an acid by heat.
- 8. (original): The intermediate layer material composition described in claim 1, which further comprises (D) a solvent.
- 9. (original): The intermediate layer material composition described in claim 1, which further comprises (E) a surfactant.
 - 10. (original): A process for forming a resist pattern, which comprises:

forming on a substrate a lower resist layer comprising an organic material;

forming on the lower resist layer an intermediate layer using the intermediate layer material composition described in claim 1;

forming on the intermediate layer an upper resist layer comprising an organic material crosslinkable or decomposable by a radiation exposure;

forming a predetermined pattern on the upper resist layer; and

etching the intermediate layer, the lower resist layer and the substrate, sequentially.

- 11. (original): The process described in claim 10, wherein the intermediate layer is formed by coating the intermediate layer material composition described in claim 1 on the lower resist layer, and then baking the coating to be insolubilized in an organic solvent.
- 12. (currently amended): The process described in claim 11, wherein the coating is baked at a temperature temperature of 150 to 250°C.

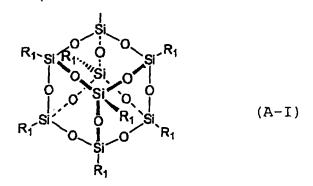
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13. (original): The process described in claim 10, wherein the lower resist layer has a thickness of 0.1 to 4.0 μm .

14. (original): The process described in claim 10, wherein the intermediate layer has a thickness of 0.02 to 0.6 μm .

15. (original): The process described in claim 10, wherein the upper layer has a thickness of 0.03 to 0.6 μm .

16 (new): An intermediate layer material composition for a multilayer resist process, comprising (A) a polymer containing a repeating unit having on a side chain thereof a group represented by the following general formula (A-I) and (B) a crosslinking agent:



wherein R_1 represents an alkyl group, an alkoxyl group, an aryl group, an aralkyl group, a cyclopentyl group or a cyclohexyl group; a plurality of R_1 's each may be the same or different.

17 (new): The intermediate layer material composition described in claim 16, wherein the polymer is a polymer having at least one of repeating units represented by the following general formulas (a-1) to (a-4):

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$$R_2$$
 R_3
 R_4
 R_3
 R_4
 R_4
 R_5
 R_4
 R_5
 R_4
 R_5
 R_5
 R_6
 R_7
 R_7

wherein (A-I) represents the group represented by the general formula (A-I) described in claim 1; R_2 represents a hydrogen atom or a methyl group; R_3 represents an alkylene group or a phenylene group; R_4 represents an alkylene group, a phenylene group or -C(=O)-O-R'-; R' represents an alkylene group.

18 (new): The intermediate layer material composition described in claim 16, wherein the polymer further contains at least one of a repeating unit represented by the following general formula (A-II) and a repeating unit represented by the following general formula (A-III):

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wherein R₅ represents a hydrogen atom or a methyl group; R₆ represents an aryl group or an aralkyl group having 20 or less carbon atoms.

19 (new): The intermediate layer material composition described in claim 16, wherein the polymer contains the repeating unit having on a side chain thereof the group represented by the following general formula (A-I) in an amount of 3 to 90 mol%.

20. (new): The intermediate layer material composition described in claim 16, wherein the crosslinking agent (B) is a phenol derivative having a molecular weight of 1,200 or less, containing 3 to 5 benzene rings in its molecule, and having 2 or more hydroxymethyl groups or alkoxymethyl groups in total, wherein the hydroxymethyl groups or alkoxymethyl groups bind to the benzene rings.

21 (new): The intermediate layer material composition described in claim 16, which further comprises (C) a compound capable of generating an acid by heat.

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22 (new): The intermediate layer material composition described in claim 16, which further comprises (D) a solvent.

- 23. The intermediate layer material composition described in claim 16, which further comprises (E) a surfactant.
 - 24 (new): A process for forming a resist pattern comprising:
 - (a) forming on a substrate a lower resist layer,
- (b) forming on the lower resist layer an intermediate layer using the intermediate layer material composition described in claim 1; and
 - (c) forming on the intermediate layer an upper resist layer.
- 25 (new): The process for forming a resist pattern described in claim 24, wherein the polymer is a polymer having at least one of repeating units represented by the following general formulas (a-1) to (a-4):

wherein (A-I) represents the group represented by the general formula (A-I) described in claim 1; R₂ represents a hydrogen atom or a methyl group; R₃ represents an alkylene group or a

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phenylene group; R₄ represents an alkylene group, a phenylene group or -C(=O)-O-R'-; R' represents an alkylene group.

26. (new): The process for forming a resist pattern described in claim 24, wherein the polymer further contains at least one of a repeating unit represented by the following general formula (A-II) and a repeating unit represented by the following general formula (A-III):

$$\begin{array}{c}
R_5 \\
-(CH_2-CH)-\\
C=0 \\
0 \\
R_6
\end{array}$$
(A-III)

wherein R₅ represents a hydrogen atom or a methyl group; R₆ represents an aryl group or an aralkyl group.

27 (new): The process for forming a resist pattern described in claim 24, wherein the polymer contains the repeating unit having on a side chain thereof the group represented by the following general formula (A-I) in an amount of 3 to 90 mol%.

28 (new): The process for forming a resist pattern described in claim 24, which further comprises (B) a crosslinking agent.

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29 (new): The process for forming a resist pattern described in claim 28, wherein the crosslinking agent (B) is a phenol derivative having a molecular weight of 1,200 or less, containing 3 to 5 benzene rings in its molecule, and having 2 or more hydroxymethyl groups or alkoxymethyl groups in total, wherein the hydroxymethyl groups or alkoxymethyl groups bind to the benzene rings.

30 (new): The process for forming a resist pattern described in claim 24, which further comprises (C) a compound capable of generating an acid by heat.

31 (new): The process for forming a resist pattern described in claim 24, which further comprises (D) a solvent.

32 (new): The process for forming a resist pattern described in claim 24, which further comprises (E) a surfactant.